

**Exploring the experiences of remote work and the skills needed to remain valuable on the
labour market during the COVID-19 pandemic**

Final thesis for the Master of Science in Communication Studies

UNIVERSITY OF TWENTE.

Name	Elena Dronova
Student number	2147823
E-mail	e.dronova@student.utwente.nl
Master	Communication Science
Specialization	Technology & Communication
Faculty	Behavioral Management and Social Sciences
Date	8 th of July 2021
Supervisor	Dr. J. Karreman
Second supervisor	Dr. E. van Laar

Abstract

Aim

The purpose of the present study is to examine the experiences and adaptation process of representatives of high and low contact proximity groups to remote work in the context of the COVID-19 pandemic. The research on experiences of remote work is still new and the differences between representatives of high and low contact proximity groups have not been explored yet whilst the pandemic could bring different outcomes for two groups in terms of work experience. The current study is built on previous research initiatives, however provides an in-depth insight into experience of high and low-contact proximity groups and their differences and similarities which distinguishes it from the previous research initiatives. Hence, the paper explores the skills employees find important to remain valuable during and after the pandemic.

Method

Qualitative research was implemented through in-depth interviews with an international sample represented by 21 Russian and Dutch participants as a research instrument to collect the necessary data. The participants were asked questions about their experiences, adaptation process, perceptions and skills they find salient to remain valuable workers on the labour market. The results of the study were coded using grounded theory.

Results

Data analysis revealed that there was a difference between high and low-contact job proximity specialists as a result of an unexpected shift to remote working. When the pandemic started it was easier to adapt to changes for low-contact job proximity specialists. Although they indicated a lack of communication, vanishing borders between work and home, and increased workload, they could keep working and gaining new skills when needed. For the high-contact group the transition to remote work was more challenging since in most cases they could not work remotely and as a result experienced job loss or problems with motivation. That were already familiar with remote work did not indicate any changes.

Conclusions

This study extended the field of scientific knowledge by distinguishing between high and low-contact groups. It observed the differences between participant's experiences and outcomes of remote work. The study indicated that there is a difference between high and low contact proximity groups and their outcomes during and after the pandemic and shown that for the high-contact group it was more difficult to adapt compared to the low-contact group. As a consequence, new possible lines of research were open such as in-depth exploration of high contact job group since this study did not provide many results for the participants in this group. These results can be particular for anyone interested in experience of employees of remote work during the corona crisis, as well as scholars, HR's, managers, psychologists, and sociologists.

Keywords: high-contact, low-contact, job proximity, skills, corona crisis, remote work

Contents

1. Introduction.....	4
2. Theoretical framework.....	6
2.1. Digital inequalities of high and low-contact proximity groups.....	6
2.2. Skills.....	7
3. Method.....	10
3.1. Research design.....	10
3.2. Participants.....	10
3.3. Procedure.....	11
3.4. Data analysis.....	12
4. Results.....	15
4.1. Low-contact job participants.....	15
4.1.1. Experiences and the adaptation process to working remotely during the corona crisis.....	15
4.1.2. Skills.....	20
4.1.2.1. Soft skills.....	20
4.1.2.2. Hard skills.....	22
4.1.2.3. Skills for the future.....	22
4.2. High-contact job participants.....	23
4.2.2. Skills.....	30
4.2.2.1. Soft skills.....	30
4.2.2.2. Hard skills.....	32
5. Discussion.....	34
5.1. Discussion of the results.....	34
5.1.1. The influence of the pandemic on the working experience of high and low-contact job professionals.....	34
5.1.2. Important skills.....	37
5.2. Theoretical implications.....	39
5.3. Practical implications.....	40
5.4. Limitations and future research.....	41
5.5. Conclusion.....	42
References.....	43
Appendix A: High-contact intensity occupations.....	53

1. Introduction

On January 30th of 2020, the WHO declared the Chinese outbreak of COVID-19 as a global pandemic (WHO, 2020). To prevent the spread of the virus, the emergency committee announced guidance on self-protection, such as face covering and social distancing while going outside. The pandemic has brought digital transformations in the working field for representatives of high and low-contact jobs: many people started working from home, meetings were held online, education was offered through digital platforms and homes eventually transformed into offices. As a consequence of remote work, some employees encountered difficulties adapting to a new reality where they experienced problems in the quality of work and motivation to perform it (Raisiene et al., 2020). In contrast, the others adapted to changes quickly due to the amount of several skills and experience.

‘Going online’ can be challenging in some professions. When the pandemic started, some doctors experienced problems adapting to application usage to receive payments and make appointments, a singer in a pop group faced technical problems while giving a concert online, and a fitness coach encountered the loss of her business due to the lack of digital skills (Bell, 2021). On the contrary, a fitness startup has become a billion-dollar business, where people can connect their phones to a smart mirror and perform exercises (Raphael, 2020). Also, the pandemic brought success to the company Okta (Kirsch, 2020), which created a startup that helps verify employees' ID through special codes sent on mobile phones. Such codes have become critically important for organizations that had to work online. Therefore, it could be argued that a set of new skills for professionals can be needed to continue working during and after the pandemic.

Hence, the COVID-19 pandemic brought a paradigm shift in the working field, especially for employees working mainly with people due to social distancing and restrictions on face-to-face interactions. According to Leibovici (2020), contact intensity at work can influence job performance. Therefore, facing the reduction in demand for employees with a high degree of face-to-face contact and social distancing, two samples for in-depth interviewing will be defined in this research. The focus of this research will be aimed at two professional groups distinguished by contact proximity, since previous studies were predominantly focused on the citizens (van Deursen, van Dijk, 2011), measured the relationship between digital and practical skills (van Laar

et al., 2017) and aimed at specific industries (Van Laar et al., 2019). Also, investigation of skills in relation to the work context during the COVID-19 pandemic still remains underresearched.

To identify which job types are the best fit for this research, the job proximity index (Leibovici et al., 2020) will be used. The index classifies occupations into low, medium and high contact-intensity categories according to index scores of 0 to 50, 50 to 75, and 75 and above, respectively (see Appendix 1). While many types of services can be postponed due to the pandemic, others can be very active since they do not require high contact intensity and are less likely to be affected (Leibovici et al., 2020). Therefore, three types of low-contact occupations were chosen in this research, namely engineers, public relations managers and financial analysts. The occupations with the highest score, namely cosmetologists, bartenders and teachers were chosen as representatives of 'high-contact.

This study aims to gain knowledge about professional's working experiences during the COVID-19 pandemic, and the skills needed for workers to remain valuable on the labour market after the corona crisis.

The central research questions are formulated as follows:

'How does the pandemic influence the working experience of high and low-contact job proximity professionals?'

'What skills are of importance considering digitalization of work as a result of the coronavirus outbreak?'

By answering the research questions, the purpose of the present research is to fill the theoretical gap distinguishing between experiences and adaptation process to remote work of representatives of high and low-contact professionals. By doing so, the paper offers a comprehensive basis for further research on the differences between the highlighted groups. The qualitative data used to conduct this study will be gathered and analysed by utilizing in-depth interviews and grounded theory. The outcomes related to experiences from working from home will be built in a codebook and analyzed accordingly. The skills mentioned by the participants in this research will be used as salient skills that workers should obtain to remain valuable in the labour market.

2. Theoretical framework

2.1 Digital Inequalities of high and low contact proximity groups

When the COVID-19 pandemic started, employees had to adjust to its consequences to continue working. According to the study of Brodeur (2020), the COVID-19 pandemic increased labour market inequalities. The author argued that some workers adapted to changes, while others did not. The findings of the study of Brodeur (2020) suggest that the most affected parties by the pandemic were individuals working in occupations with high proximity to others. This is supported by the findings of Dahal et al. (2021) who discovered that the COVID-19 pandemic is likely to increase inequalities between workers, especially for those who have a higher prevalence of home-based work. This was also related to education, while those educated poorly and primarily worked in high proximity with customers were considered more vulnerable.

Digital inequalities referred to as the digital divide in this research, can be considered one of the most important emerging social issues in the modern information society (Hoffman et al. 2006). According to Castells and Kling (2002), the digital divide can be defined as inequalities in access and use of Information and Communication Technologies (ICT). The digital divide includes differences in motivations in Internet usage, skills, attitudes, uses and outcomes people obtain from the Internet (Scheerder, 2019). There are three levels of the digital divide: the first level, or *economic divide*, predominantly deals with affordability and accessibility. The second level, or *usability divide*, deals with differences in usage and difficulties users face. The third level, or, in other words, the *empowerment divide*, separates people by the benefits they obtain from technology application (van Deursen & van Dijk, 2014). It could be argued that not all individuals are equal in terms of the digital skills required to use computer-operated spaces effectively.

While digital inequalities were already existing, yet the COVID-19 pandemic increased them dramatically (Beunoyer et al., 2020). Also, it could create a difference in the adaptation process between representatives of high and low-contact proximity occupations due to unequal number of skills and experience prior to the COVID-19 pandemic. From a technological point of view, the

COVID-19 pandemic brought significant changes amongst the population in the use of digital technologies and media sources (Guitton, 2020). The ongoing COVID-19 pandemic has accelerated the transition to a digital society and exposed the digital gap between countries and within societies.

Hence, a recent research on employees' well-being showed that employees' mental state during the pandemic was dependent on coping strategies. Positive coping strategies led to higher well-being and better quality of working life, whilst negative coping strategies led to lower well-being and worse quality of working life. (McFadden et al., 2021). Also, according to Ornell & Schuch (2020), it is necessary to implement public mental health policies. Such professionals as psychologists, psychiatrists, and social workers could provide people with the necessary support and understanding to prevent such negative consequences, burnouts and loss of motivation.

2.2 Skills

As a result of the corona crisis, the workplace context has changed and it has become essential to be familiar with digital devices and gain digital skills (Brodeur, 2020). It is crucial to obtain several digital skills to utilize benefits from Internet use (Scheerder, van Deursen & van Dijk, 2017; A. van Deursen & van Dijk, 2010). The study of van Deursen and van Dijk (2011) showed that while the amount of accessible information becomes widespread on the Internet, people with a low level of Internet skills have troubles with finding it online, thus being disadvantaged compared to people with high Internet skills. Furthermore, the same study argues that the level of Internet possession is related to prior educational level, and the results of Internet use vary according to the difficulty (van Deursen, van Dijk, 2011). Moreover, in the increasingly automated and digitalized world, several soft and hard skills are also needed to solve cognitive tasks (Loshkareva et al., 2016). Additionally, the current situation in the world requires us to use higher cognitive levels that can differ from the accustomed (Loshkareva et al., 2016). The complex new world demands the ability to come up with new solutions for routine tasks. This could result in the change of the workplace concept, whether engagement and creative potential take the leading role.

Skolkovo Innovation center's report (2019) stated that with the growing complexity of the world, there is a need for a further increase in the diversity of existing skills and knowledge of

workers. Based on the trends in the modern world, employees would need to obtain “hard” skills knowledge that is related to the change of technology and working conditions in organizations (Skolkovo Innovation Center, 2019). The second set of skills was defined as “soft skills” or, in other words, general knowledge that can be applicable towards various professional, social and personal contexts (Skolkovo Innovation Center, 2019). In addition, the skills would include stress resistance and the ability to take into consideration a variety of possible scenarios and build strategies. These skills would deal with uncertainty and ambiguity of the future including collaboration, creativity and entrepreneurial skills (Skolkovo Innovation Center, 2019). Eventually, these skills would incorporate system and ecosystem thinking, problem solving, design and project thinking (Skolkovo Innovation Center, 2019). The study also proposed a ‘tailed’ diagram illustrating the growth and the importance of skills, whether with the increasing complexity of the world, the number of skills increases.

The widespread use of technology requires individuals to obtain a certain level of digital skills to remain effective (van Laar et al., 2019). The findings of van Laar et al. (2019) suggest that the overall level of 21-st century digital skills is still mediocre, however claiming that self-employed workers contribute to having a higher level of digital skills since they perform more tasks on their own. In the framework of 21-st century digital skills van Laar et al. (2019) identified that such core skills as: technical, information management, communication, collaboration, creativity, critical thinking and problem solving, and five contextual skills, such as ethical awareness, cultural awareness, flexibility, self-direction and lifelong learning are ‘key operational components for 21st century workers’. This study investigated mostly highly-educated samples, however, it suggests that the skills such as information, communication collaboration, critical thinking, creativity and problem solving will remain crucial for all workers in all industries. This can lead to the further investigation of skills of importance after the corona crisis. Based on previous studies it is salient to explore the differences in experience of a sudden shift to remote working between representatives of high and low-contact proximity occupations since it can provide a valuable insight into social science and the general understanding which group has been affected more by the corona crisis.

The uniqueness of the following study is to explore personal experience and adaptation to working from home of representatives of high and low contact job professions and define several

skills employees need to remain valuable on the labour market after the corona crisis compared to findings of the previous studies. This research is also valuable in terms of workers' productivity to illustrate what they demand in such challenging times. Consequently, it would help both: recruiters and potential candidates to benefit from knowing which skills are relevant and require more effort to obtain.

3. Method

3.1 Research design

This study proceeds with a qualitative method to understand the pandemic's consequences, gain in-depth insights into the participant's work experience, and derive the skills perceived as necessary for workers in high and low contact intensity jobs. Consequently, an analysis was run on the results by means of coding using ATLAS software.

An exploratory qualitative research design was used since the study aims at gaining deep insights into the personal experience of high and low-contact proximity workers. According to Baxter (2015), qualitative study methodology provides researchers with tools to study complex phenomena from various angles within their contexts. A semi-structured interview is created to gain subjective responses from participants in relation to a particular situation or phenomena they have experienced (McIntosh and Morse, 2015). According to Bariball & While (1994), the semistructured interview data collection method helps explore participants' opinions, clarify ongoing issues, derive complete information and traverse sensitive topics. Therefore, this method was chosen to explore personal experiences of working from home and the consequences of the COVID-19 pandemic for low and high contact intensity groups.

The inductive approach serves as an exploratory procedure where no research hypothesis is needed (Sibeoni, Verneuli, 2020). On the contrary, they emerge from the material gained through research methods to comprehend participant's experience (Sibeoni, Verneuli, 2020). Furthermore, generating and discussing skills for both groups provided valuable insights into the issue of interest. Structuring the results provided a descriptive framework for interpreting the pandemic's consequences for individuals, raising awareness about the issues caused by the pandemic and its influence on the respondents.

3.2 Participants

The population of the conducted research was heterogeneous and consisted of 21 participant, including 12 male and 9 female participants with the age range from 25-45. The sample was divided into two groups containing 11 individuals in low-contact and 10 in high-contact groups.

It was decided to choose an international sample since it could provide more information than derived from the local population. The study was aiming for an international sample with a balanced number of female and male participants. The actual sample consisted of 11 Russians and 10 Dutch participants. The participants were recruited using the author's personal network. All participants were living in the Netherlands, yet the interviews were conducted online due to the pandemic regulation over social contact. The low-contact group contained 6 Russian and 5 Dutch respondents and was represented by 3 engineers, 2 software developers, 2 PR managers, 4 financial consultants. The high-contact contained 6 Dutch and 4 Russian participants with the following division: 1 makeup artist, 3 university teachers, 1 cosmetologist, 3 bartenders and 2 waiters. The participants were recruited via snowball sampling by means of social media.

3.3 Procedure

The interviews were conducted during the period of October and November 2020. In this period, all the COVID-19 restrictions were implemented, and the country was going into the second lockdown. The interviews were recorded on a personal phone. After the analysis the interviews were removed from the used device. During all interviews, it was ensured that there were no background noise and outside disturbances at the location of the participant and the researcher. Each session on average lasted for 35-55 minutes. All interviews were conducted in English language.

First, the participant was welcomed and given a brief introduction about the research and the interview. Second, an informed consent was read and only after the agreement the interview took place. In the informed consent, it was explained that the participants were randomly chosen according to their job position, and their anonymity within the following study was ensured. Additionally, permission to record the session for further analysis was asked. There were 26 questions, with 9 main and 17 sub-questions. The questions were divided into blocks and topics of interest, such as experience of working from home, perception of face-to-face interactions and skills of importance.

The interviews were semi-structured and focused on the following aspects: First, the adaptation process and personal experience of working from home during the coronavirus outbreak, represented by questions such as: *'How has your work changed when the pandemic*

started?' with the follow-up question '*How do you experience working from home?*' were asked. Second, information about the importance of contact proximity at work and perception of working with people in general was interrogated with questions such as: '*How important is contact with people in your work*' with the follow-up question '*How does working with people make you feel?*'. Third, previous remote experience and willingness to continue working digitally when the pandemic is over with questions such as: '*Have you worked remotely before?*' followed by a question '*Would you agree to continue working from home when the pandemic is over?*' were introduced. Fourth, the skills of importance for professionals nowadays represented with a question, such as '*Which skills do you think are important for professionals nowadays?*' were interrogated.

3.4 Data analysis

After conducting 21 interviews, transcribing was done verbatim, and the names of the participants were replaced by gender definition, nationality and job title to ensure confidentiality. Atlas.ti software was used for coding the interviews. After transcribing the interviews, an in-depth analysis was conducted to gain some insight into the differences between the two groups and their adaptation process to changes due to the corona crisis. An inductive approach was used to convert the raw textual data into a summary format so it could provide links between the research objectives and summary findings out of the raw data. To answer each research question, a different set of codes was used. For the first research question, codes categorized under categories such as *adaptation process to working digitally during corona crisis* and *contact proximity* were used. For the second research question, codes categorized under category *skills* were used, respectively. Modifications in the coding scheme were made where necessary, especially when the consequences and "new" skills were derived from transcripts and divided into categories. Then, another round of coding was performed in order to apply modifications consistently to all transcripts. Finally, consequences of the pandemic, work experience of the participants and skills were summarized and built into a framework (Table 1). In the results section, 8 codes will be used as subheadings to explain the results gained from this research.

Intercoder reliability

To ensure the reliability of the coding, it was decided to investigate the intercoder reliability by calculating Cohen's Kappa. To achieve that, a second coder was asked to recode the data. The final coding scheme included a total of 13 codes. The second coder was not involved at any stage of the research, therefore could not be biased in any way. The second coder was given the coding scheme and a list of the segments of conducted interviews.

Cohen's Kappa is a way to calculate to what extent two independent coders agree with each other in terms of assigning codes to a document. This test determines if the rate of agreements between the two coders is higher than it would be as if it was solely due to a change (Cohen, 1960). For this study, a total of 351 codes were generated, in accordance, 41 codes were compared between the two coders in order to find the intercoder reliability and calculate Cohen's Kappa. In this study, Cohen's Kappa was 0.92. This indicates an almost perfect agreement between the two coders, thus the coding was taken as valid. Both coders agreed with each other on 38 out of 41 codes. The 4 interviews coded by the second coder were randomly chosen from 21 interviews which were coded by the primary coder before. Finally, to calculate the intercoder reliability, 5 codes were excluded from the scheme analysis since it was decided that they did not bring significant results.

Table 1: Descriptions of each code with related quotes of participants from high and low contact proximity sample.

Category	Code	Related concepts
Adaptation process to working digitally during corona crisis	Consequences of the pandemic	This study indicated direct consequences of the pandemic such as: working remotely, lack of physical closeness with co-workers and influence of the pandemic on work performance and motivation.
	Pros of working from home	As a result of working from home participants indicated such advantages as integration of work and home, longer sleep duration, lowered stress levels, comfortable environment, time sufficiency and flexible schedule of work.

	Cons of working from home	On the other hand, participants encountered connection problems, lack of immediate response from colleagues, lack of real-life communication, difficulties to stay off-routine working from home, distratcion from work, decrease of productivity and tiredness of the same setting.
	Pandemic and Mental Health	According to participants, after working remotely for a while such feelings as anxiety, sadness, agitation, frustration, loneliness and an increase of mental stress followed by an 'empty' feeling were presented.
	Working from home vs. Office	The participants indicated flexible schedule of work in preference. They expect employees to let them work two days remotely and three in the office. For the representative of low-contact jobs home office is in preference.
Skills	Soft skills	Adaptivity, flexibility, self-organization, information flow management, clear expression of thoughts in written and verbal way, communication, focus on work, empathy, flexibility, willingness to learn.
	Hard skills	Ability to solve issues online, work with e-applications, video and photo editing, AI knowledge, programming, work with data.
	Skills to improve in the future	Self-promotion, patience, time management, data analytical skills, machine learning, artificial intelligence.

4. Results

This chapter contains the results gained from the analysis of the data derived from the conducted interviews. In order to structure the results, they have been grouped together according to the coding framework. First, the results related to the adaptation process and the consequences of the pandemic are presented. Second, the soft and hard skills perceived by participants as important are listed.

4.1 Low-contact job participants

In the low-contact proximity group participant's work did not depend much on communication with the other people, but with technical devices, since they could perform their work from home without implementing drastic changes.

4.1.1 Experiences and the adaptation process to working remotely during corona crisis

Consequences of the pandemic

In general, the pandemic brought a lot of changes for the representatives of both groups. For the agents of low-contact professions, the changes were less drastic since they could adapt more quickly to working digitally. However, the participants were still missing real-life formal and informal gatherings. Such tools as Zoom or Microsoft Teams were not considered as a substitute for communication.

'We had some business networkings before the pandemic so we were able to gather with the other professionals from the industry and talk in a real-life but after the pandemic started we could negotiate only via Zoom which is very inconvenient but that's how it is' - (Russian, Male, Financial consultant).

The dominant part of the participants in the low proximity group pointed out that video calls make them feel more tired than real-life communication, where calls with several participants, conferences, or group calls are the most exhausting. This can be related to the special attention to video calls, attempts to distinguish between people talking and expressing only related

information to the others without having a ‘small talk’ as pointed by participants:

‘The most exhausting once for me are calls where there are five or six people participating. And you have to listen to all of them, and when its 1:1 meetings usually everyone sees each other, everyone knows who is talking, nobody has issues with the connection or breaking microphone or something like this and here you have to be all the time concentrated to understand who is speaking, you have to be quite tolerant to technical issues or something. And when you are in the office, you can arrange a meeting and discuss it face-to-face’ - (Russian, Male, Financial Consultant).

In addition, participants found it difficult to remain dense in written communication since working offline they could reach a colleague and ask for something immediately without a long and precise message:

I think that working online makes you emotionally exhausted because you have to be more precise in formulations, you are also writing mostly so you have to create a better message’ - (Dutch, Male, Software Engineer).

As it can be seen, the distinction between work and home does no longer exist for some employees working from home. On the contrary, video calls seem to be a good tool when interacting with clients, as indicated by two participants.

Pros of working from home

Almost all low-contact job participants noted that working remotely made them save time on travel, where they could use it for other purposes. It also reflected their mood, where according to participants, commuting used to make them nervous and tired:

‘If you have to use underground, you do not only spend much time which you do, but you also get very nervous because if you travel by metro station in the pick hours, you always get smashed by other people, other nervous sweaty people, so when you finally arrive at the office, you are already tired, that’s the problem.’ - (Russian, Female, PR manager).

According to several participants, the time spent on travel can be used in a more productive way, for example, building networks and enhancing relationships:

'I can spend a lot of time on my client relations development because I don't spend time to get from my office to their office, I can spend this time to search online for my clients, or to spend it talking to my client, so a lot of salespeople, they could find benefits of the remote model, but of course, all of them wanted to go back offline.' - (Russian, Financial consultant, Male).

Therefore, it is clear that for participants there is a clear benefit of saving time by spending it in a more useful way compared to commuting. Also, they reported being less stressed as a consequence.

Cons of working from home

For several participants remote work leads to a decrease in the efficiency within the team:

'Well, I am really missing the colleagues around me, but I can get used to it. I can't say that it makes me depressed or that I am happy but once again it is just different and you know... It leads to less efficiency within the team' - (Russian, Male, Financial Consultant).

According to this participant, when interacting online people cannot function as a team on the same level. It can be explained by different levels of Internet possession, communication problems and lack of informal communication which is important between colleagues. In addition, according to the same participant, motivation can arise when one is surrounded by other people working. For some participants, the amount of work has slightly increased:

'You probably work a little bit more because you don't have any borderline between home and work. You are getting tired that you have all the time to search for ways of performing online communication better.. and working from home escalates into working 24/7 somehow as well... and you're stuck to your laptop which results in tiredness' - (Dutch, Male, Financial Consultant).

The participants noticed that the borders between work and home are vanishing, whereas as a result they could not feel relaxed after work. Moreover, it made them constantly check emails and perform several tasks even during non-working hours. Some participants noted that they felt uncomfortable while using video calls. They related it to paying too much attention to the appearance of oneself and/ or others, where it is the least important factor when it comes to working.

'For me what is important is the message that is exchanged during the conversation... So video calls can be stressful especially if you are using your video for the duration of the talk and you are constantly confronted with your own image which is stressful already.' - (Dutch, PR-manager, Female).

On the contrary, according to the other participants, video calls without having cameras turned on create a more distant feeling and lessen the perceived feeling of being one unit.

'Even with that most of the calls are held without cameras, you really have a much weaker feeling of being a part of the team.' - (Russian, Male, Engineer).

Therefore, when on the one hand it should be a freedom of choice to turn the camera on or not, some companies have implemented internal rules, where workers have to wear a uniform, have a specific background and occasionally specific lighting.

Pandemic and mental health

According to several participants, the pandemic accelerated their feelings of loneliness and anxiety. They noticed that after working remotely for a while such feelings as sadness, agitation and frustration have increased.

'When I started working from home it was more fun and felt different, but after a while I noticed that I became more stressed and anxious than ever before' – (Dutch, Male, PR-manager).

The participants also indicated that the level of mental stress has doubled followed by feelings of emptiness and loneliness.

'You know, I just feel empty and dull after all. And it makes me sick. I miss people around and all informal gatherings we used to have' – (Dutch, Male, Engineer).

Therefore, it can be assumed that such feelings as anxiety loneliness and emptiness can be related to lack of face-to-face interaction between employees at work. Consequently, if this raising issue will be ignored, it can lead to more serious consequences in the future.

Work from home vs. working from the office

When participants were asked to choose how they would continue working after the pandemic, most of them decided to choose a flexible schedule, where 3 days a week they can be presented in the office and 2 days work from home. Almost all of the participants noted that only working from home is not convenient due to the lack of real-life communication that cannot be replaced, however, 2 days of remote work can save time on travelling and make employees feel more relaxed, therefore having a better attitude to work in the long-term.

'I want to have this mixed model, like when I can stay two days at home and three days work from the office. That's the best solution for me' - (Russian, Male, Financial Consultant).

One of the participants expressed concerns related to the bills, whether working from home made him spend more money on gas and electricity and he raised a question related to the bills for utilities.

'Staying at home I am using my electricity, water, gas, whatever..on my own..and..who will pay for this?', - (Russian, Male, Software developer).

This statement raises a salient question, where those employees who agreed working remotely can ask organizations they work for to pay the bills for gas, water and electricity because their usage of utilities has increased.

4.1.2 Skills

To adapt to working remotely, a number of skills are needed. In order to compare the skills perceived as important and the skills participants wanted to obtain for the future, one of the question blocks in the interview scheme was related to skills itself, divided by hard skills, soft skills and skills that participants want to master in the near future.

4.1.2.1 Soft skills

One of the skills that were frequently mentioned is adaptiveness. Participants found it important to be adaptive to any situation in life, e.g. corona crisis and be able to adjust their work and life to it:

'It should not be important to you whether it is a pandemic or it's a flood or it's an earthquake. You should be mentally ready for something to happen in the world and to be ready to change yourself in a minute' - (Russian, Female, PR-manager).

Since many participants expressed concerns related to the trend of overworking, such skills as *being able to stop at any moment* were introduced. According to the participants, it is important to feel yourself and not hesitate to take a break when needed. They added that it is salient to be able to tell co-workers that they feel tired. Otherwise, it is relatively easy to feel bad mentally and physically which can lead to a decrease in efficiency and longer task performance. Finally, they noted that talking to a psychologist and meditation can help to overcome stress.

Some proposed improving self-organization and limiting time on work which is *'blending'* in daily life.

'It's a very important skill because otherwise working online, working in communication would be impossible. Communication then takes all your time because in communications there is always something happening' - (Dutch, Male, PR consultant)

Some participants added that the ability to limit the time spent on tasks can be supportive to

prevent burnout.

'Just choose yourself over the other people because you have a general understanding that if you will be weak and unhealthy, if you will feel bad mentally and physically, you will be less efficient and will be doing the same work for much longer' - (Russian, Female, Financial consultant).

The other skill mentioned was defined as *managing the information flow*. According to the participants, information management is more important than stress management, since understanding what information is important and what is not can prevent burnout in the future.

'Everyone is online now and the information flow is so huge that it leads to a high stress level and we all need to be able to manage it' - (Russian, Male, Financial consultant).

Time management as a skill has also been mentioned by participants as crucial, where they linked time spent on working digitally to tiredness and proposed to pay more attention to time management, thus finding an equilibrium between work and rest.

'Make your agenda in a way that you have your own time that nobody can interrupt. It's a very important soft skill because otherwise working online, working in communication would be impossible. Communication then takes all your time because in communications there is always something happening.' - (Russian, Female, PR manager).

Another important skill according to participants is the ability to express thoughts in a clear way, namely communication: both verbal and written.

'When you solve a complex problem and find a solution you need to deliver the message right, to make sure that people decoded it right. So you need to have crystal clear communication in whatever format, both verbal and written' - (Dutch, Male, Financial consultant).

Some participants mentioned communication several times and linked the process of communication as 'overcoming themselves to interact with the other people'. For others, on the contrary, it was more skillful in terms of sales.

4.1.2.2 Hard skills

According to participants, nowadays it is crucial to be able to work with digital devices and solve issues online. In addition, social media marketing skills were mentioned as important:

'All media channels immediately come to social media' - (Dutch, Female, PR-manager).

The other participants supported that a *general understanding of the Internet establishment and work with e-applications* is also crucial.

'It is important to be familiar with IT technologies in order to work online; to be able to access any system. It might sound easy, but it is different for everyone' - (Russian, Female, Financial consultant).

Hence, according to participants, skills related to *video and photo editing* were also in need:

'It is truly important to have a vision of what is needed to edit pictures and videos and how to do that yourself' - (Dutch, female, software engineer).

The ability to know how to use a live stream on social media, that can be saved and score many views afterwards, thus reaching a bigger audience has also been mentioned as important.

'We created a rubric of live streaming based on research that showed that even after the stream when it's saved it scored even more views than it was having during streaming' - (Russian, Female, PR-manager).

Overall, according to the participants in the low-contact proximity group, such hard skills as familiarity with e-applications and knowledge of platforms that help to improve visual content are salient.

4.1.2.3 Skills for the future

When participants were asked which skills they wish to obtain in the future, several

mentioned *patience* as an important skill to have and to work on. When the work switches to digital and goals cannot be achieved quickly due to connection problems, patience is the key to remain healthy:

'You have to be patient about yourself achieving your goals and you have to be patient in relation to the other people' - (Russian, Female, PR-manager).

Some participants mentioned that they would learn a program to help them manage their agenda, create plans for months and present notifications.

'I want my laptop to give me notifications itself as a tool' - (Dutch, Female, Financial consultant).

One of the participants noted that it is crucial to develop data analytical skills. According to him, tools for data analysis, methodology of data interpretation and data reading are important.

'In 5-10 years it will be one of the most important subjects at school - to work with data', - (Russian, Male, Financial consultant).

Such technical skills as knowledge of different programming languages, machine learning and artificial intelligence were mentioned by several participants as well. This has also been supported by one of the participants of this study:

'You can learn how to do stuff in Excel, Python or C but you can't obtain soft skills that fast. In order to learn how to communicate you need to practice more. And working in a team is super important' - (Dutch, Male, Financial consultant).

Therefore, according to the participants, there is a need to be familiar with different software and new technology which increases your value in the future and helps to build a network.

4.2 High-contact job participants

Overall, in the high-contact group, the pandemic brought changes in every field, such as

horeca, teaching professions and the beauty industry. For the University teachers, experience and the adaptation process to remote work was slightly different from the other subgroups since it required more preliminary work to adapt the content. Overall, some participants in the high-contact group could adapt to the new reality, while for others it caused drastic changes, e.g. complete loss of jobs or requalification.

Consequences of the pandemic

The participants in the high-contact proximity group pointed out that they seem risky to stick to their jobs in the current world. They raised concerns about its reliability and financial risks since they were not longer confident in the future of this industry.

'Now, when the restaurants are being highly infected it's not for sure good... if something happens again, I won't be able to have a job so that is why I am working on leaving this field to go working in a different field' - (Dutch, Male, Restaurant manager/waiter).

According to participants, in summer, when the restaurants were open for a while before the new wave, waiters and hosts experienced a lot of pressure and responsibilities due to COVID-19 regulations in public places:

'Everybody was happy to be able to get out of the house which resulted in us having a huge increase in work pressure and workflow. We were busier than normal, we had to not only be busy with guests, but also with all the new regulations and new rules for staff issued by the government according to the pandemic, so you are not only being a host, you are also playing 'police officers' - (Dutch, Male, Waiter).

Some restaurant owners quickly adapted to changes and transferred workers from the horeca field to supermarkets where they could still earn the same amount of money making sure that visitors obey COVID-19 rules.

'We still have the income we normally have but now not at the restaurant but at the supermarket, so I think it is a good replacement for now' - (Dutch, Male, Waiter).

For workers in the beauty industry, such as cosmetologists and makeup artists the changes differentiate. The changes did not reflect cosmetologists a lot, while for a makeup artist they led to a potential loss of a job in the future since all of the work used to be dependent on the upcoming events and since the pandemic started all of the events were cancelled.

'Some new restrictions came to a place that are related to the new sanitary standards. The time between clients has expanded, I can also say that the number of people lessened because clients are simply afraid of coming. In the beginning, the number of people has decreased a lot, but now it is returning to normal..the fear has gone and people come wearing masks and gloves. We are trying to create a schedule of appointments so clients don't bump into each other in the hall' - (Russian, Female, Cosmetologist).

For makeup artists it was difficult to survive during the corona crisis because the dominant part of the demand for makeup artist's services is dependent on events, where during the pandemic most of them were cancelled, thus leaving the representatives of this job unemployed.

'The surplus is quite low in my opinion.. and when the pandemic came all of the events such as for photoshoots, weddings and concerts were cancelled, so such services as mine were not in need anymore. As a result, since the pandemic started, from March until June there were zero clients asking for my services' - (Russian, Female, Makeup artist).

The participant mentioned that in order to remain stable in this profession, it is salient to obtain new knowledge and following trends. In addition, she found it very important to be active on social media and learn how to promote themselves to expand the client list.

Compared to others, for the University teachers, the transition online was challenging. Despite the same level of stress, they had to adapt to changes quickly to remain the study load on the same level. Since the education process was performed online, teachers had to come up with new content for studies, record videos before lectures, change the exam format and communicate with students properly. Also, they had to be more attentive towards their students to make sure they receive the same level of education they used to receive before the pandemic.

'What I encountered as one of the first things is that lecturing with current online technology, where there is no feedback by students.. you have this kind of a black hole in which you have only your words as a lecturer and that's it, that does not work at all' - (Dutch, Male, University teacher).

That means that teachers are losing connections with the students, because there is no feedback in the class due to muted microphones and fewer questions not directly to the teacher. Also, both teachers and students are lacking student-to-student communication which can serve as an exploratory framework when new topics are being introduced.

'I started to appreciate the fact of students having informal interactions while doing a practical assignment. Right now they have to work with codes, do some measurements and put in the report. So.. it sounds quite simple, but all of a sudden, every step becomes a kind of problem which you cannot tell a student whether it's a problem because you are not physically present. These kinds of problems are quickly sorted out if you are in a lecture room' - (Dutch, Male, University teacher).

The claim that borders between work and home are vanishing has been supported by the representatives of lecturing professions:

'The positive side is that yes, it integrates work more with your home and private life and the downside is that it integrates your work more with your home and private life' - (Dutch, Female, University teacher).

Although the lectures are performed online, teachers still go to the University to deal with some work and perform tasks. The University teachers described the current environment in the office as follows:

'Right now the office is no longer the office where you go for the things that you would go to an office for. Now the atmosphere is not there, those interactions are not there, so there is no point in going there'
- (Dutch, Male, University teacher).

In addition, for teachers in applied disciplines the pandemic turned out to be more challenging than for the others due to the inability to provide physical examples to interact and

study with (e.g. robots and techniques).

'It will always be interacting with people and technology and that can't take place right now. We tried to define partial solutions that students do from home, so they got kits with all the materials they need to do certain practical work from home but still, that requires incredible effort. Especially all of the real physical interaction where it's a physical embodiment and sometimes even in visual modalities.. you need to experience them in a real physical setting.' - (Dutch, Male, University teacher).

According to the professor, it is almost impossible to reproduce the same environment and materials online that used to be taken as an example in the class. For embodiment lessons, for instance, only physical examples could be used.

Pros of working from home

For several participants in high-contact group working from home served a good opportunity to arrange everything around:

'Now I am happy working from home because I am more focused on the things that I do, it's very important that I provide structure for myself so everything must be planned every day and it's very clear to me what I need to do every day if I am working from home' - (Dutch, Male, University teacher).

Consequently, for some participants work from home served as a valuable opportunity to perform arrangements and follow the agenda, whilst for the others, it started raising questions regarding the future of interpersonal communication.

Cons of working from home

When the participants were asked to comment on their perception of video calls, several related stresses of online calls to self-evaluation. They argued that people spend too much time checking how they look, although it is not the picture but the message what is important:

'For me the message that is exchanged is important. So video calls can be stressful especially if you are using your video for the duration of the talk and you are constantly confronted with your own image, which according to studies can be stressful already' - (Dutch, Male, University teacher).

According to this participant, it is not the image in front of you that is important. He claims that when the video is off it is easier to concentrate on the topic and not be distracted by the visual cues and expressions of the recipient of the communication. This result is consistent with the results in the low-contact group where participants also experienced problems with video calls because of turned on cameras distracting them from the topic of the conversation.

Also, many participants indicated problems with motivation during the second wave of the pandemic, where it was difficult to be motivated and happy:

'Nothing new in the daily routine' - (Dutch, Male, University teacher).

The subgroup 'University teachers' added that they are missing interactions with students and the ability to go through pages of their papers:

'If you sit together, you can show the pages, you can show the highlights, it's more difficult to do well online. For brainstorming and ideas sharing I think it is really important to be together and to be able to get feedback, really be able to interact in real life, to pass on a piece of paper, to be physically presented, have this sense..' - (Dutch, Male, University teacher).

Eventually, one of the participants noted that he does not see any future in working online and expressed his concerns about the future of communication:

'All the jobs which you conduct from home these days are quite good but I think in the future life there for sure will be computers and automation.. those jobs you can do, so.. which is.. in my eyes are quite horrible because this is gonna limit people from connecting to the other people' - (Dutch, Male, University teacher).

Therefore, it can be concluded that for the participants the high-contact proximity group it was more difficult to adapt to remote work compared to the low-contact proximity group since

their jobs required more face-to-face interaction. Also, participants in high-contact group experiences more problems with motivation to work.

Pandemic and Mental health

For the participants in the high-contact proximity group the transition to remote work or stagnation period where they could not continue working turned out to be challenging because for some professions it was impossible to change the habitual way of working:

'I used to have mental issue before the pandemic, but when I almost lost my job during the lockdown, I started feeling depressed and anxious. To be honest, I can say that the pandemic only increased my mental issues' – (Dutch, Male, Waiter).

One University teacher noted that working from home made him feel more relaxed, calm and secure since everything could be scheduled on time and meetings with students related to evaluation of their papers were held more productive:

'I can call myself a stressed person so each time when it comes to chaotic interaction it makes me feel stressed and anxious as a result. When I started working remotely, I finally reached zen' - (Dutch, Male, University teacher).

Eventually, several participants indicated that they slowly started feeling endangered when the first lockdown was lifted and they could start working again since many people did not follow the COVID-19 rules and were not willing to keep distance and wear masks where required. As a result, many workers in horeca industry stated that it made them feel guilty for not coping with their work, even though previously their jobs did not require implementation of preventive measures.

Working from home vs. Office

According to the participants, it is not only important to return to the office, but also to be

able to communicate with the colleagues in the same manner:

'I would say I would like to start working for a couple of days at the office again, but that really makes sense if those are the days when everybody else is there as well' - (Dutch, Male, University teacher).

Furthermore, most of the high-contact proximity group participants agreed on the importance of having a flexible schedule at work.

'I definitely think that this pandemic has shown that some amount of working from home can definitely be a good thing, but it's just too much to be home. 60/40 would be a good solution.' - (Dutch, Male, University teacher).

These results are consistent with the results from the low-contact group, where participants also voted for a flexible schedule in order to stay motivated in the long term. The other participant supported this claim:

'I realised how productive I am when working from home because I can do stuff with a necessary concentration' - (Dutch, Male, University teacher).

Consequently, both groups agreed on the importance of flexible schedule at work as well as importance to not only return to an office setting, but to be able to interact with colleagues and clients in the same manner.

4.2.2 Skills

4.2.2.1 Soft skills

In the high-contact group, workers in the beauty industry pointed out such skills as setting the right price and ability to bargain as important in their fields. In addition, communication skills were also reported as salient:

'You need to know how to tackle your customer and establish good communication despite the fact how simple it can be seem. I think that everything depends on communication, you need to assure the client about some things, give advice and provide the best service you can' - (Dutch, Male, Waiter).

Hence, the participants added that it is crucial to follow the trends and stay up to date to remain valuable as a professional:

'Every season is different and brings something new, so it is quite intense, therefore you have to be always on fleek with it. So that you will be valuable as a professional. So I personally now mostly follow the trends' - (Russian, Female, Makeup artist).

Several participants pointed out that such skill as *focus* is important while working digitally and manage your time appropriately to stay productive:

'Sometimes seeing others working makes you feel that you also need to do your job but when you are working at home you are basically alone so it was this kind of social element which is essential' - (Dutch, Male, University teacher).

Hence, such skills as patience and tolerance were mentioned by participants, claiming that when the work is performed online, despite any issues that can occur, people have to accept it:

'It is a different reality where some things are more difficult and it's easy to get frustrated, but I think that's important that you somehow realize that things sometimes do go wrong but it's important to protect yourself and others and try to be relaxed and not panic and get annoyed too easily' - (Dutch, Male, University teacher).

The participants from the horeca group supported this opinion adding that the pandemic is affecting mental health and it becomes stressful to repeat the same information to people in the restaurant since it is *'tiring and stressful'*. Eventually, according to the participants in horeca group, when working with people it is important to be sincere and leave the stress behind, so people can feel relaxed and trustful towards workers:

'When it comes to interaction, some people are not very good at it. It is especially different when it comes to street promoting where you're actually talking to people and you're getting them out of their comfort zone because they're walking around and they don't have a sign around them: 'Talk to me!' and they also don't really want to be approached but you have to get through that barrier and the more natural this flow goes, the more easy the conversation goes too' - (Dutch, Male, Host in a nightclub).

One of the participants mentioned that since the pandemic started, he has become advanced in facilitating discussions with students online which made his lessons more interactive and engaging for students.

4.2.2.2. Hard skills

The results from the high-contact group provided less information since for them hard skills turned out to be less important compared to soft skills. However, such skills as the capability to handle digital platforms and the ability to communicate clearly and consciously in the written form, e.g. understanding of the point where a different medium should be used seem important for several participants:

'Right now I sometimes see things explode in the e-mail discussion, where people are simply not on the same level or do not understand what the others are talking about and then there is a lot of communication overhead which is sometimes pointless' - (Dutch, Male, University teacher).

Hence, usage of application such as Zoom and Canvas seem important for participants due to its usability and ease to use:

'It's quite easy to develop these new skills and to be able to present your lectures online and interact with others online, to record, to share etc. I didn't really use it before but it's quite positive in the end that everyone almost learned it, and these are skills I will definitely make use of' - (Dutch, Male, University teacher).

Although for some participants application usage turned out to be a new experience, they acquired that skill quickly and were positive about its future application and usability. Finally,

the participants did not have ideas related to the skills they want to obtain in the future, however only one participant from the beauty industry indicated *self-promotion* via social media as a salient skill. According to her, it is really important to establish your Instagram or Facebook profile and create attractive visual content.

'You need to look for new clients somewhere and nowadays it can be done mostly by means of social media marketing' - (Russian, Female, Makeup artist).

According to her, the basics of social media marketing are exceptionally helpful when it comes to self promotion and since her job was in particular related to appearance and its improvement, they seem very important to provide visual content with self-promotional aim.

5. Discussion

In this section, the results related to the experiences of working from home and salient skills to perform a job during and after the COVID-19 pandemic are discussed. Next to that, the answers to the main research questions: *'How does the pandemic influence the working experience of high and low-contact job proximity professionals?'* and *'What skills are of importance considering digitalization of work as a result of the coronavirus outbreak'* are given. In addition, the relevance of this study is discussed addressing the theoretical contribution of the existing scientific literature related to experiences of remote work and relevant skills of the 21st century deduced in previous studies. Also, its practical implications for HR's and recruiters on one side and potential employees on the other side are presented as relevant skills that both should take into consideration. Lastly, the limitations of this study are addressed including recommendations on how to improve a similar study and the possibilities for future research emerging from the outcomes of this study.

5.1 Discussion of the results

5.1.1 The influence of the pandemic on the working experience of high and low contact job professionals

In this section, the impact of the COVID-19 pandemic on the work performance of the representatives of high and low contact jobs is presented. Concerning the first research question, one can say that for low contact job representatives the pandemic brought fewer changes compared to the high contact group representatives. Overall, according to the low-contact job participants, the amount of work has slightly increased or not lessened compared to working from the office. High contact job participants experienced either loss of a job or the need of requalification to another position of the field since they were not able to perform working from home.

The quantitative study of Rubin & Nikolaeva (2020) conducted at the beginning of the pandemic explored the experiences of employees working from home where the focus was on

the employees *potentially able to work from home* and referred to as a *low contact group* in this study. The respondents indicated that remote work made them less productive which contradicts findings from the current study, where the dominant part of the participants reported that they have become more productive in a comfortable environment. This can be explained by adaptivity to the current situation since the study of Rubin & Nikolaeva (2020) was conducted at the beginning of the pandemic and there was not much known about the COVID-19 pandemic and its influence on working experience. Also, the study of Rubin & Nikolaeva (2020) is more applicable to the participants in the low-contact group.

When asked about the advantages and disadvantages of working remotely, participants in both high and low contact groups mentioned lack of social interaction and work-life balance as the most important cons; and flexibility and comfort as advantages. In addition, most car and public transport commuters noted that they do not miss the time spent on travelling to work and back. The findings of this research suggest that after the pandemic the majority of participants would want to have a flexible schedule which supports the findings of the study of Rubin & Nikolaeva (2020). This means that there is a need for a change of the new way of work where such changes as flexible working schedule and limitation of calls per day can serve as an option.

The dominant part of the participants in the low-contact group lacked direct contact at work, feedback from co-workers and managers and found it difficult to maintain relationships with the other members of the team. They also reported a lack of team spirit and motivation, difficulties in self-organization and noted that the most difficult part was to draw a line between work and private life while working remotely.

As might be expected, *previous experience of working from home is related to the evaluation of the current situation*. The findings of this study show that those participants who used to work remotely prior to corona crisis found it less challenging compared to those for whom it was a new experience. This can be supported by the quantitative research of Alves, Amorim and Bezerra (2021) who found a significant difference between employees familiar with working from home compared to those who were not. In other words, workers who had some prior experience of remote work prior to pandemic could easier adapt to changes.

For the high contact group, the pandemic brought drastic changes such as jobs cut off or inability to switch on working digitally. According to participants in this group, it was extremely hard to continue working because of the COVID-19 restrictions. Also, since there

was no ability to make a living and earn money, most of the participants considered change of profession or a field in the future. Also, compared to participants in the low contact group, high contact representatives reported more frequently that they are missing social interactions. Besides, it turned out that in the high proximity group participants suffered more from depression or anxiety since they were not potentially able to continue working and as a result, the pandemic changed their life adding higher psychological pressure.

For the university teachers, the transition to remote work has been a major challenge. First, this group was slightly different from the other groups since despite the fact that the concept of work has changed for them completely, they fully adopted and continued working. For this group, the transition from high proximity to low proximity was the most challenging where many professors encountered problems while adapting the learning program to a digital format. In addition, the gap in communication between students and University teachers has widened since it was difficult to proceed with immediate response (Bao, 2020). Those teachers who had children at home reported that they have particularly struggled to balance their work and home lives while working remotely. These findings correspond with the recent research on teacher's wellbeing and adaptation to working remotely (Kraft & Simon, 2020) that has shown that a sudden move to online teaching created challenges for their work, especially for those with young children. In addition, it decreased learning engagement with students (Kraft & Simon, 2020). Finally, Universities with better working conditions turned out to be more successful in helping teachers during the pandemic, for instance with a flexible schedule or arrangements for children. Hence, Arntz (2020) found that the success of productive work from home is dependent on children's presence and disturbances; and if all family members are presented at home it can lead to less efficient professional outcomes from parents. Therefore, not only University teachers are affected by disturbances caused by children. In addition, children's presence can increase the number of conflicts between work and family thus influencing the mental health of workers (Arntz, 2020). Also, the findings of this study support the findings of Arntz (2020) and show that it was particularly difficult for University teachers to work from home since they had lots of lectures planned and according to them, at least twice a day children disturbed them in the middle of the presentation. For participants in the low-contact group, children did not seem a problem while working remotely which can be explained by less amount of live-presentations and more paperwork rather than interaction with colleagues and

students.

Ultimately, the dominant part of the participants in the low-contact group and University teachers from the high-contact group lacked direct contact at work, feedback from co-workers and managers and found it difficult to maintain relationships with the other members of the team. They also reported a lack of team spirit and motivation, difficulties in self-organization and noted that the most difficult part was to draw a line between work and private life while working remotely. For high-contact job representatives, it occurred to be challenging to remain working and keep their job, where the results of this research indicated that in crisis times such as the COVID-19 pandemic high-contact jobs can be influenced by external factors such as job loss. This answers the first research question, showing that such elements as a flexible schedule, limited time spent on work and support from the organization are important for employee's wellbeing. It is salient for organizations to put effort into the development of communication within the team and help employees to prevent complete job loss by means of requalification or transition of the job online.

5.1.2 Important skills

The pandemic showed that in order to be valuable and keep the job, workers need to obtain new skills which serve as an added value to the skills that were previously detected as useful for 21st-century professionals (van Deursen et al., 2019). In light of the second research question for both high and low contact jobs, group participants reported that it is salient to develop such soft skills as adaptivity, patience, flexibility and collaboration to be a valuable employee during and after the pandemic. When spoken regarding hard skills, video editing, work and familiarity with data as well as with e-applications were mentioned as useful and important. Most of the participants considered improving those skills in the future. Although collaboration and communication were also mentioned as significant, such new skills as patience and adaptability to changes are considered more important to remain valuable as an employee and grow in your career path in the post-COVID world according to participants. This can be explained by the change in the working environment and switching to digital, where technical devices and the spread of the information can be slow, therefore patience is the key. In addition, it is salient to be adaptive and to be able to adjust to different e-applications. For example, when working

remotely, some participants gained new hard skills such as video and photo editing, pre-recording of material and decoding of data.

The findings of this study serve as an added value to the findings of the report of Skolkovo, which identified that the skills dealing with ambiguity and uncertainty are important in the modern world (Skills of the future, 2019). Such skills as collaboration, creativity and communication defined by previous research conducted in Skolkovo (2019) and by van Laar et al. (2020) are salient. Although such skills ‘of the future’ as ecosystem thinking, problem-solving design and project thinking are important, the findings of this study performed in the pandemic context suggest that flexibility, patience and self-organisation are also crucial. The findings of this study correspond with the findings of Skolkovo (2019) suggesting that in the modern world it is not only important to obtain soft skills, but also to gain knowledge in hard skills, such as programming and video-editing. Eventually, according to participants, the ability to work with data is crucial to remain valuable as a worker.

The findings of this study also show that education plays an important role when it comes to digital skills. First, this research has shown that low-contact proximity individuals were safer due to their prior educational level which was at least Bachelor or Master, where their jobs allowed them to switch to working online. On the contrary, for some high-contact proximity job participants working remotely was impossible and in the worst-case scenario brought a job loss. This can be related to a low level of academic education since almost all of the participants in this group only obtained courses and did not receive a University degree. The participants in the high-contact group reflected this challenge themselves and were ready for requalification.

The subgroup ‘University teachers’, however should be perceived separately since their level of education was preliminary high. This can show a link between education and safety in crisis times, where the higher education of an individual is, the safer they experience changes. Second, at the beginning of each interview, some background information was asked in order to see if there is a relationship between education and the ease of adapting to working digitally. Participants from the low contact group had preliminary higher education compared to the participants in the high contact group. The adaptation process to working digitally was easier for low contact group participants and university teachers due to their higher level of education than waiters and beauty workers, respectively. These findings support the previous findings of van Deursen & van Dijk (2017) suggesting that highly educated individuals obtain more benefits

from the Internet compared to low educated participants.

The study of van Laar et al. (2020) shows that there is a strong need for research on communication and collaboration skills. The findings of this research support the previous findings that communication and collaboration skills are of need during and after the COVID-19 pandemic. Subsequently, despite collaboration and communication, such new skills as patience and adaptability are important to remain valuable as an employee and grow in your career path. This implies the second research question, illustrating that the pandemic brought changes in terms of both soft and hard skills and made employees developing different skills from skills that were considered important by previous studies (van Deursen & van Dijk, 2020; Rios & Ling, 2020; van Laar et al., 2020; van Deursen & van Dijk, 2017).

5.2 Theoretical implications

This study is of high theoretical relevance since it compares experiences of working from home during the pandemic of high and low contact proximity groups which is a new research context that has not been investigated before. It discusses its influence on the working process of workers, their adaptation to the new reality and discovers the skills they need in the post-corona crisis world.

The current study is focused on both - high and low proximity groups and provides valuable insights into experiences of distinguished samples compared and their outcomes. The differences and similarities between high and low contact proximity groups in terms of the pandemic were never investigated. Studying both high and low contact groups helped to cover the whole picture and see not only specific experience but discover in-depth the issues and differences in experiences of the pandemic by means of the conducted interviews. It is not clear how changes reflect motivation and professional outcomes in the future since the pandemic is still going on and the lockdown remains stable (Hoffman et al., 2020). However, a further study can proceed to investigate how to keep employees motivated to work and prevent a possible mental issue, e.g. a burnout as a result of remote working and limitation of social interactions (Moss, 2018).

The results of this study can serve as a basis for qualitative research by means of a focus group investigating how employees differ in their experiences working from home providing

links with the research Raisiene et al. (2020) who compared the experience of working from home of male and female and found differences between genders. Also, future research can investigate high contact proximity group in more detail since the research context used in this study demonstrates more results for the low-contact groups since they were more able to work remotely (Rubin & Nikolaeva, 2020).

Finally, the findings of this research are of added value to the previous findings of van Deursen, van Dijk (2011) and van Laar et al. (2020) who found that there is a strong need for research on communication and collaboration skills. This study revealed that for representatives in both groups those skills are salient but not enough to remain valuable. Future research can focus on specific professions to investigate which skills, in particular, are needed for their representatives. For instance, University teachers turned out to be a completely different subgroup. Therefore, they can be investigated separately further.

5.3 Practical implications

Based on this study several practical suggestions can be made for HR's and recruiters to realize which skills they expect from potential employees and for organizations in all fields to help their employees to develop these skills. Broadly speaking, the most important is to develop communication, adaptation, flexibility and collaboration skills and be flexible, patient and adaptive to changes.

First, HR managers and recruiters are responsible to take care of the workers. Therefore, it is clearly important for them to be familiar with the changes the pandemic brought for employees and be capable to support existing employees, find the most suitable workers and arrange lectures or courses to improve salient skills where needed. Recruiters should take into account that such skills as patience, flexibility and adaptivity and familiarity with e-applications are salient and require those skills from potential employees.

Second, this study is highly relevant for future employees in high and low contact fields. For representatives of both groups, it is salient to develop several skills and be notified about positive and negative experiences of remote work to be prepared for challenges in the future and remain valuable as an employee on the labour market. Parts of this research can be used to see

how to prevent burnout and problems with motivation. For example, a questionnaire based on the advantages and disadvantages of remote work based on the outcome of this study can be created and guidance with recommendations on how to prevent burnout can be given to employees in high and low contact proximity fields to support their well-being.

Third, this study revealed that employees in high and low-contact proximity professions need to have a flexible schedule at work, where working remotely only is not an option. Also, working only from the office is tiring, therefore it is important to develop a flexible schedule of work in order to keep employees motivated during and after the pandemic.

Lastly, the results of this study revealed the importance of organizational and managerial support in mentally and physically difficult times as stated by participants. For instance, professional external psychological support, psycho-education and training about coping with the consequences of the pandemic can take the form of workshops can be created to educate the staff with better coping skills (McFadden et al., 2021).

5.4 Limitations and future research

Similar to all studies, this research has several limitations. The interview questions could have been formulated more explicitly related to the personal experiences of individuals as sometimes their interpretations were generalised instead of being related to a single experience encountered. For instance, a question *'Did working from home affect your mental health?'* could have been more clear, such as: *'Did working from home reflect your mood? Do you notice any differences in your behaviour and wellbeing?'*. Second, the future research can investigate the subgroup of the sample of this research, namely 'University teachers' as a separate group and find how this group differs from the other subgroups. Also, the high contact group can be investigated in-depth since in the current study fewer results from this group were derived.

The future research in the experience of the COVID-19 pandemic on employees can be focused on the consequences of the pandemic of employees determined by differences in people's skill levels (van Laar et al., 2020; van Deursen & van Dijk, 2017). According to several scholars, not only the digital divide should be in focus in terms of access to the Internet and skills needed for it but also the consequences and outcomes determined by skills (van Laar

et al., 2020; van Deursen & van Dijk, 2017; Scheerder et al., 2017; Selwyn, 2004). It would also be beneficial to identify to what extent both negative and positive experiences of working from home influence work performance. Finally, it would be interesting to define which skills and to what extent influence the quality of work, stimulate income and help employees to remain valuable (van Laar et al., 2020; van Deursen & van Dijk, 2017).

5.5 Conclusion

The COVID-19 pandemic has provided a new work context for representatives of high and low contact proximity jobs. Nevertheless, experiences and adaptation processes to remote work of high and low contact proximity groups were never compared in one study. For low contact participants, the changes were not drastic which made them adapt quickly, however they were missing real-life interactions and reported that the amount of work has increased. For high contact job professionals except for university teachers, it was more challenging or even impossible to adjust and continue working. This research has shown that there was a difference in adaptation and experiences of remote work between high and low contact groups, where the first group experienced job loss and insecurity for the future. The results of this study show that it is important to support employees by implementing a flexible schedule, helping them to develop new skills and develop communication within the team during and after the pandemic.

To provide recruiters and potential employees who wish to be valued specialists in the future with practical implications for learning and reflection goals, this study aimed at enlightening the experiences and challenges employees encountered working remotely during the pandemic. From the theoretical perspective, a comparison between representatives of high and low contact proximity jobs during the pandemic shows that the changes employees encountered are more diverse and challenging than expected. On the practical side and as managerial implications, this study highlights the key skills that potential employers and recruiters need to pay attention to and problems workers encounter that organizations should work on dealing with. Considering these factors such consequences as loss of motivation or burnout can be prevented and employees well-being during challenging times can be improved.

References

- Alves, T. L. D. L., Amorim, A. F. A., & Bezerra, M. C. C. (2021). “Not one less”!
Adaptation to the home office in times of COVID-19. *Revista de Administração Contemporânea*, 25(spe). <https://doi.org/10.1590/1982-7849rac2021200234.en>
- Arntz, M., Ben Yahmed, S., & Berlingieri, F. (2020). Working from home and COVID-19: The chances and risks for gender gaps. *Intereconomics*, 55(6), 381–386.
<https://doi.org/10.1007/s10272-020-0938-5>
- Bao, Y., Sun, Y., Meng, S., Shi, J., & Lu, L. (2020). 2019-nCoV epidemic: address mental health care to empower society. *The Lancet*, 395(10224), e37–e38.
[https://doi.org/10.1016/s0140-6736\(20\)30309-3](https://doi.org/10.1016/s0140-6736(20)30309-3)
- Baxter, P., & Jack, S. (2015). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report*.
<https://doi.org/10.46743/2160-3715/2008.1573>
- Beaunoyer, E., Dupéré, S., & Guitton, M. J. (2020). COVID-19 and digital inequalities: Reciprocal impacts and mitigation strategies. *Computers in Human Behavior*, 111.
<https://doi.org/10.1016/j.chb.2020.106424>
- Bell, L. B. (2021). *The future of healthcare: 5 new jobs to watch out for*.
Welcometothejungle.Com.
<https://www.welcometothejungle.com/en/articles/future-jobs-tech-healthcare-post-covid>

- Blank, G., & Lutz, C. (2016). Benefits and harms from Internet use: A differentiated analysis of Great Britain. *New Media & Society*, 20(2), 618–640.
<https://doi.org/10.1177/1461444816667135>
- Brodeur, A., Clark, A. E., Fleche, S., & Powdthavee, N. (2021). COVID-19, lockdowns and well-being: Evidence from Google trends. *Journal of Public Economics*, 193.
<https://doi.org/10.1016/j.jpubeco.2020.104346>
- Broos, A. (2005). Gender and Information and Communication Technologies (ICT) Anxiety: Male self-assurance and female hesitation. *CyberPsychology & Behavior*, 8(1), 21–31. <https://doi.org/10.1089/cpb.2005.8.21>
- Bruno, G., Esposito, E., Genovese, A., & Gwebu, K. L. (2011). A critical analysis of current indexes for digital divide measurement. *The Information Society*, 27(1), 16–28. <https://doi.org/10.1080/01972243.2010.534364>
- Calvert, P. (2004). *Virtual inequality: Beyond the digital divide, 2004*. Karen Mossberger, Caroline J. Tolbert and Mary Stansbury. Virtual Inequality: Beyond the Digital Divide. Washington, DC: Georgetown University Press 2003. 208 p., ISBN: 0878409998 US\$19.95 (soft cover). *Online Information Review*, 28(4).
<https://doi.org/10.1108/14684520410553886>
- Cohen, J. (1960). A Coefficient of agreement for nominal scales. *Educational and Psychological Measurement*, 20(1), 37–46.
<https://doi.org/10.1177/001316446002000104>
- Coles, R. R., Hill, S., Macnamara, C., & Macnamara, N. (2005). Idiopathic hearing loss

mimicking noise-induced hearing loss. *Audiological Medicine*, 3(2), 116–120.

<https://doi.org/10.1080/16513860510033756>

Cranford, S. (2020). Zoom fatigue, hyperfocus, and entropy of thought. *Matter*, 3(3), 587–

589. <https://doi.org/10.1016/j.matt.2020.08.004>

Dahal, S., Banda, J. M., Bento, A. I., Mizumoto, K., & Chowell, G. (2021). Characterizing

all-cause excess mortality patterns during COVID-19 pandemic in Mexico. *BMC*

Infectious Diseases, 21(1), 21-22. <https://doi.org/10.1186/s12879-021-06122-7>

Djamba, Y. K., & Neuman, W. L. (2002). Social research methods: Qualitative and

quantitative approaches. *Teaching Sociology*, 30(3), 380-384.

<https://doi.org/10.2307/3211488>

Eastin, M. S., & LaRose, R. (2006). Internet Self-Efficacy and the Psychology of the

Digital Divide. *Journal of Computer-Mediated Communication*, 6(1), 28-31.

<https://doi.org/10.1111/j.1083-6101.2000.tb00110.x>

Esterik, P. V. (1986). : Distinction: A social critique of the judgement of taste . Pierre

Bourdieu. *American Anthropologist*, 88(2), 456–457.

<https://doi.org/10.1525/aa.1986.88.2.02a00180>

Fernando Leibovici, Ana Maria Santacreu and Matthew Famiglietti. Social distancing and

contact-intensive occupations. (2020). *St. Louis Fed On the Economy Blog*, 1–4.

[https://www.stlouisfed.org/on-the-economy/2020/march/social-distancing-contact-](https://www.stlouisfed.org/on-the-economy/2020/march/social-distancing-contact-intensive-occupations)

[intensive-occupations](https://www.stlouisfed.org/on-the-economy/2020/march/social-distancing-contact-intensive-occupations)

- Giles, M. (2020, September 3). *Fast-Growing Cloud Security Company Okta Just Hired A New CIO*. *Forbes*. <https://www.forbes.com/sites/martingiles/2020/09/03/cloud-security-company-okta-new-cio/?sh=112bf1312031#1f7da2%20d5203>
- Graneheim, U., & Lundman, B. (2004). Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today*, *24*(2), 105–112. <https://doi.org/10.1016/j.nedt.2003.10.001>
- Guittou, M. J. (2020). Cyberpsychology research and COVID-19. *Computers in Human Behavior*, *111*, 1063-107. <https://doi.org/10.1016/j.chb.2020.106357>
- Hoffman, D. L., Novak, T. P., & Schlosser, A. (2006). The evolution of the digital divide: How gaps in internet access may impact electronic commerce. *Journal of Computer-Mediated Communication*, *5*(3), 35-37. <https://doi.org/10.1111/j.1083-6101.2000.tb00341.x>
- Hoffman, K. E., Garner, D., Koong, A. C., & Woodward, W. A. (2020). Understanding the intersection of working from home and burnout to optimize post-COVID19 work arrangements in radiation oncology. *International Journal of Radiation Oncology*Biography*Physics*, *108*(2), 370–373. <https://doi.org/10.1016/j.ijrobp.2020.06.062>
- Kirsch, N. (2020, August 28). *New Billionaire: Todd McKinnon's Cloud Security Company Is Booming As More Americans Work From Home*. *Forbes*. <https://www.forbes.com/sites/noahkirsch/2020/08/27/new-billionaire-todd-mckinnons-cloud-security-company-is-booming-as-more-americans-work-from->

home/?sh=65202de23555

- Kling, R., & Castells, M. (2002). The Internet galaxy: Reflections on the Internet, business, and society. *Academe*, 88(4), 66. <https://doi.org/10.2307/40252194>
- Kraft, M. A., & Simon, N. S. (2020). Teachers' experiences working from home during the COVID-19 pandemic. *Upbeat*. Downloaded July, 7, 2020.
- Lāma, E., & Lāma, G. (2020). Remote study process during COVID-19. *New Trends and Issues Proceedings on Humanities and Social Sciences*, 7(3), 124–129.
<https://doi.org/10.18844/prosoc.v7i3.5241>
- Louise Barriball, K., & While, A. (1994a). Collecting data using a semi-structured interview: a discussion paper. *Journal of Advanced Nursing*, 19(2), 328–335.
<https://doi.org/10.1111/j.1365-2648.1994.tb01088.x>
- Lupac, P. (2011). Beyond the digital divide. *National Civic Review*, 100(3), 4–7.
<https://doi.org/10.1002/ncr.20069>
- Marquis, A. (2019, March 6). *What Is the Difference Between High & Low Customer Contact Service? Small Business* - Chron.Com.
<https://smallbusiness.chron.com/difference-between-high-low-customer-contact-service-33808.html>
- Maslach, C., & Goldberg, J. (1998). Prevention of burnout: New perspectives. *Applied and Preventive Psychology*, 7(1), 63–74. [https://doi.org/10.1016/s0962-1849\(98\)80022-x](https://doi.org/10.1016/s0962-1849(98)80022-x)

- McFadden, P., Ross, J., Moriarty, J., Mallett, J., Schroder, H., Ravalier, J., Manthorpe, J., Currie, D., Harron, J., & Gillen, P. (2021). The role of coping in the wellbeing and work-related quality of life of UK health and social care workers during COVID-19. *International Journal of Environmental Research and Public Health*, *18*(2), 25-27. <https://doi.org/10.3390/ijerph18020815>
- McIntosh, M. J., & Morse, J. M. (2015). Situating and constructing diversity in semi-structured interviews. *Global Qualitative Nursing Research*, *2*, 12-13. <https://doi.org/10.1177/2333393615597674>
- Modarres, A. (2011). Beyond the digital divide. *National Civic Review*, *100*(3), 4–7. <https://doi.org/10.1002/ncr.20069>
- Moss, J. (2018). Helping remote workers avoid loneliness and burnout. *Harvard Business Review on Health*.
- Niehaves, B., & Plattfaut, R. (2014). Internet adoption by the elderly: employing IS technology acceptance theories for understanding the age-related digital divide. *European Journal of Information Systems*, *23*(6), 708–726. <https://doi.org/10.1057/ejis.2013.19>
- Ozimek, A. (2020). The future of remote work. *SSRN Electronic Journal*, *10*. <https://doi.org/10.2139/ssrn.3638597>
- Pitkow, J. E., & Recker, M. M. (1995). Using the Web as a survey tool: results from the second WWW user survey. *Computer Networks and ISDN Systems*, *27*(6), 809–822. [https://doi.org/10.1016/0169-7552\(95\)00018-3](https://doi.org/10.1016/0169-7552(95)00018-3)

Potter, M. A., Quill, B. E., Aglipay, G. S., Anderson, E., Rowitz, L., Smith, L. U., Telfair, J., & Whittaker, C. (2006). Demonstrating excellence in practice-based research for public health. *Public Health Reports, 121*(1), 1–16.

<https://doi.org/10.1177/003335490612100102>

Raišienė, A. G., Rapuano, V., Varkulevičiūtė, K., & Stachová, K. (2020). Working from home—who is happy? A survey of Lithuania’s employees during the COVID-19 quarantine period. *Sustainability, 12*(13), 17-18.

<https://doi.org/10.3390/su12135332>

Raphael, R. (2019, November 25). Fitness startup Mirror claims it’s ‘building the next iPhone.’ *Fast Company*. <https://www.fastcompany.com/90434763/fitness-startup-mirror-has-big-plans-including-telemedicine-were-building-the-next-iphone>

Rubin, O. R., & Nikolaeva, A. N. (2020). What we can learn in a pandemic. *Annals of Bioethics & Clinical Applications, 3*(4), 8-11. <https://doi.org/10.23880/abca-16000146>

Scheerder, A. J., van Deursen, A. J. A. M., & van Dijk, J. A. G. M. (2019). Negative outcomes of Internet use: A qualitative analysis in the homes of families with different educational backgrounds. *The Information Society, 1*–13.

<https://doi.org/10.1080/01972243.2019.1649774>

Scheerder, A. J., van Deursen, A. J., & van Dijk, J. A. (2019b). Internet use in the home: Digital inequality from a domestication perspective. *New Media & Society, 21*(10), 2099–2118. <https://doi.org/10.1177/1461444819844299>

Scheerder, A., van Deursen, A., & van Dijk, J. (2017). Determinants of Internet skills, uses and outcomes. A systematic review of the second- and third-level digital divide. *Telematics and Informatics*, 34(8), 1607–1624.

<https://doi.org/10.1016/j.tele.2017.07.007>

Selwyn, N. (2004). Reconsidering political and popular understandings of the digital divide. *New Media & Society*, 6(3), 341–362.

<https://doi.org/10.1177/1461444804042519>

Shah, K., Chaudhari, G., Kamrai, D., Lail, A., & Patel, R.S. (2020). How essential is to focus on physician's health and burnout in coronavirus (COVID-19) pandemic?.

Cureus, 12(4), 2. doi:10.7759/cureus.7538

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22(2), 63–75.

<https://doi.org/10.3233/efi-2004-22201>

Sibeoni, J., Verneuil, L., Manolios, E., & Révah-Levy, A. (2020). A specific method for qualitative medical research: the IPSE (Inductive Process to analyze the Structure of lived Experience) approach. *BMC Medical Research Methodology*, 20(1), 44-

56. <https://doi.org/10.1186/s12874-020-01099-4>

Skolkovo. (2017, May). *Skills of the future: how to thrive in the complex new world*. E.

Loshkareva, P. Luksha, I. Ninenko, I. Smagin, D. Sudakov.

<https://drive.google.com/file/d/1Fgo6wNZjLqQnsU0E6uIrk1ALTKhTGwPm/view>

w

Smith, B. (2020, December 19). *Microsoft launches initiative to help 25 million people worldwide acquire the digital skills needed in a COVID-19 economy*. Official Microsoft Blog. <https://blogs.microsoft.com/blog/2020/06/30/microsoft-launches-initiative-to-help-25-million-people-worldwide-acquire-the-digital-skills-needed-in-a-covid-19-economy/>

Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, 27(2), 237–246.
<https://doi.org/10.1177/1098214005283748>

van Deursen, A. J., & van Dijk, J. A. (2013). The digital divide shifts to differences in usage. *New Media & Society*, 16(3), 507–526.
<https://doi.org/10.1177/1461444813487959>

van Deursen, A. J., van Dijk, J. A., & ten Klooster, P. M. (2015). Increasing inequalities in what we do online: A longitudinal cross sectional analysis of Internet activities among the Dutch population (2010 to 2013) over gender, age, education, and income. *Telematics and Informatics*, 32(2), 259–272.
<https://doi.org/10.1016/j.tele.2014.09.003>

van Deursen, A., & van Dijk, J. (2010). Internet skills and the digital divide. *New Media & Society*, 13(6), 893–911. <https://doi.org/10.1177/1461444810386774>

van Laar, E., Van Deursen, A. J. A. M., Van Dijk, J. A., & De Haan, J. (2019). Twenty-first century digital skills for the creative industries workforce: Perspectives from industry experts. *First Monday*, 10. <https://doi.org/10.5210/fm.v24i1.9476>

- van Laar, E., van Deursen, A. J. A. M., van Dijk, J. A. G. M., & de Haan, J. (2020).
Determinants of 21st-Century Skills and 21st-Century Digital Skills for Workers:
A Systematic Literature Review. *SAGE Open*, *10*(1), 2.
<https://doi.org/10.1177/2158244019900176>
- van Laar, E., van Deursen, A. J., van Dijk, J. A., & de Haan, J. (2017). The relation
between 21st-century skills and digital skills: A systematic literature review.
Computers in Human Behavior, *72*, 577–588.
<https://doi.org/10.1016/j.chb.2017.03.010>
- van Laar, E., van Deursen, A. J., van Dijk, J. A., & de Haan, J. (2019). Determinants of
21st-century digital skills: A large-scale survey among working professionals.
Computers in Human Behavior, *100*, 93–104.
<https://doi.org/10.1016/j.chb.2019.06.017>
- Walton, J. K. (2013). ‘Social tourism’ in Britain: history and prospects. *Journal of Policy
Research in Tourism, Leisure and Events*, *5*(1), 46–61.
<https://doi.org/10.1080/19407963.2012.703377>
- White, M. D., & Marsh, E. E. (2006). Content Analysis: A flexible methodology. *Library
Trends*, *55*(1), 22–45. <https://doi.org/10.1353/lib.2006.0053>
- World Health Organization. (2020, February 5). *Novel Coronavirus (2019-nCoV):
situation report*, 12. <https://apps.who.int/iris/handle/10665/330777>

Appendix 1. High-contact proximity index.

High Contact-Intensity Occupations

Occupation	Proximity index	# of workers	Avg. # of hours worked per week	Avg. annual labor income	% of U.S. workforce
Barbers, Hairstylists and Cosmetologists	92.17	1,097,556	36.00	\$17,334	0.87%
Occupational Therapy and Physical Therapist Assistants and Aides	90.50	95,730	36.22	\$41,846	0.08%
Home Health and Personal Care Aides; and Nursing Assistants, Orderlies and Psychiatric Aides	90.25	1,614,277	37.03	\$25,991	1.28%
Therapists, Veterinarians, Nurses, Midwives and Audiologists	88.09	4,070,995	38.28	\$65,743	3.22%
Supervisors of Food Preparation and Serving Workers	88.00	846,895	42.31	\$32,805	0.67%
Health Care Diagnosing or Treating Practitioners	86.19	1,543,291	46.42	\$167,744	1.22%
Supervisors of Personal Care and Service Workers	84.50	107,558	42.11	\$36,586	0.09%
Health Technologists and Technicians	82.73	2,600,424	38.82	\$44,271	2.06%
Pilots, air traffic controllers and flight attendants	81.60	281,574	41.13	\$105,009	0.22%
Other Health Care Support Occupations	80.20	1,148,226	36.62	\$30,497	0.91%
Preschool, Elementary, Middle, Secondary and Special Education Teachers	79.54	4,800,982	41.08	\$47,769	3.80%
Other Teachers and Instructors	79.00	642,712	34.18	\$36,841	0.51%
Motor Vehicle Operators	75.56	4,099,099	44.22	\$37,654	3.24%
Other Personal Care and Service Workers	75.50	2,474,634	34.70	\$18,019	1.96%
Food and Beverage Serving Workers	75.17	1,866,495	33.67	\$22,721	1.48%

SOURCES: 2017 American Community Survey, O*NET and authors' calculations.

*Leibovici et al. (2017). High-contact intensity occupations. [Screenshot by Elena Dronova]. American Community survey, O*NET calculations. Retrieved from: <https://www.stlouisfed.org/on-the-economy/2020/march/social-distancing-contact-intensive-occupations>*